MONTHLY WEATHER REVIEW.

Editor: Prof. CLEVELAND ABBE.

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INTRODUCTION.

The MONTHLY WEATHER REVIEW for June, 1897, is based on 2,927 reports from stations occupied by regular and voluntary observers, classified as follows: 143 from Weather Bureau stations; numerous special river stations; 33 from post surgeons, received through the Surgeon General, U. S. Army; 2,588 from voluntary observers; 96 received through the Southern Pacific Railway Company; 14 from Life-Saving stations, received through the Superintendent United States Life-Saving Service; 32 from Canadian stations; 1 from Hawaii; 20 from Mexican stations. International simultaneous observations are received from a few stations and used together with trustworthy newspaper extracts and special reports.

Special acknowledgment is made of the hearty cooperation of Prof. R. F. Stupart, Director of the Meteorological Service of the Dominion of Canada; Mr. Curtis J. Lyons, Meteorologist to the Government Survey, Honolulu; Dr. Mariano Bárcena, Director of the Central Meteorological Observatory of Mexico, Mr. Maxwell Hall, Government Meteorologist, Kingston, Jamaica, and Commander J. E. Craig, Hydrographer, United States Navy.

The REVIEW is prepared under the general editorial supervision of Prof. Cleveland Abbe. Unless otherwise specifically noted, the text is written by the Editor, but the meteorological tables contained in the last section are furnished by Mr. A. J. Henry, Chief of the Division of Records and Meteorological Data.

Attention is called to the fact that the clocks and self-registers at regular Weather Bureau stations are all set to seventy-fifth meridian or eastern standard time, which is exactly five hours behind Greenwich time, and, as far as practicable, only this standard of time is used in the text of the REVIEW, since all Weather Bureau observations are required to be taken and recorded by it. The standards used by the public in the United States and Canada and by the voluntary observers are believed to generally conform to the modern international system of standard meridians, one hour apart, beginning with Greenwich. Records of miscellaneous phenomena that are reported occasionally in other standards of time by voluntary observers or newspaper correspondents are generally corrected to agree with the eastern standard; otherwise, the local meridian is mentioned.

CLIMATOLOGY OF THE MONTH.

GENERAL CHARACTERISTICS.

The paths of the centers of low pressure did not generally pass over the States east of the Mississippi, and most of them passed north of the Lake Region; the mean pressure was generally deficient. The mean temperature was deficient in the northern sections east of the Rocky Mountains, but in excess in the southern sections, and vice versa on the Pacific coast. The mean temperature was the lowest on record for the month in the Lake Region, the Middle States, and New England. Precipitation was in excess from Kansas to New England, but was deficient in the central Gulf coast. Numerous severe local storms occurred among which the most important were those of the 10th in Minnesota and the 24th in Kansas.

ATMOSPHERIC PRESSURE.

[In inches and hundredths.]

The distribution of mean atmospheric pressure reduced to sea level, as shown by mercurial barometers, not reduced to standard gravity, and as determined from observations taken daily at 8 a. m. and 8 p. m. (seventy-fifth meridian time), is shown by isobars on Chart IV. That portion of the reduction to standard gravity that depends on latitude is shown by the numbers printed on the right-hand border.

The *mean pressure* during the current month was highest in southern Florida and nearly as high on the coast of northern California. It was lowest in Arizona and nearly as low in Montana and the Northwest Canadian Provinces and Newfoundland.

The highest reduced pressures were: In the United States, Key West, 30.07; Jupiter and Tampa, 30.06; Eureka, 30.05; Charleston, 30.04; Jacksonville, 30.03. In Canada, Bermuda, 30.11; Port Stanley, 29.97; White River, 29.95; Parry Sound, Ottawa, and Halifax, 29.93; Yarmouth, 29.92; Sydney, 29.91. The lowest were: In the United States, Phœnix, 29.72; El Paso, 29.79; Havre, 29.80; Dodge City, 29.82; Williston, 29.83. In Canada, St. Johns, N. F., 29.79; Prince Albert and Grindstone, 29.80; Calgary, 29.83; Kamloops, 29.84.

As compared with the normal for June, the mean pressure was generally slightly deficient, the principal excesses being a few hundredths on the east Gulf coast and in the Northwest Provinces. The regions of greatest deficiency were New Brunswick, Newfoundland, the coast of New England, the Missouri Valley, and the interior of the Pacific coast States.

The greatest excesses were: In the United States, Helena, Port Huron, and Denver, 0.04; Key West and Galveston, 0.03. In Canada, Minnedosa and Swift Current, 0.04; Edmonton, Qu'Appelle, and Saugeen, 0.03. The deficits were: In the United States, Concordia, 0.07; Havre, Miles City, and Omaha, 0.06; Portland, Me., Nantucket, and New Haven,